

REMARKS

Claims 1, 3-6, 9-14, 30, 31, 34-41 and 44-49 remain pending in the application. Minor amendments are made to the claims to simply overcome the objections. The amended claims contained herein are equivalent in scope as those originally filed and, thus, no narrowing amendment is made. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

CLAIM OBJECTIONS

Claims 1-6, 9-14, 30-31, 34-41, and 44-49 stand objected to for various informalities. Although Applicant does not necessarily agree, in the interest of expedited prosecution, Applicant amends the claims as suggested by the Examiner. Accordingly, reconsideration and withdrawal of these objections are respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3-5, 30 and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mizuta (U.S. Pat. No. 5,965,943) in view of Yoshiaki, et al. (Japanese Pat. No. 01-191451), Hikari (Japanese Pat. No. 09-017795), or Natsuya (Japanese Patent No. 07-066207). This rejection is respectfully traversed.

Independent claim 1 calls for forming a metal post on a pad conforming to a shape of a through-hole while the resist layer exists. Independent claim 3 calls for

forming a metal post on a pad conforming to a shape of a through-hole while the resist layer exists. Independent claim 4 calls for forming metal posts in through-holes and on a pad conforming to a shape of the through-holes while the resist layer exists.

In contrast, Mizuta, column 4, lines 56-62 reads:

"Referring to FIG. 4, rhenium is deposited by sputtering to cover SiO₂ formed protection film 3 and bonding pad electrode 2. Resist is applied onto the rhenium which is then patterned by photolithography to form a resist pattern 12. The rhenium is etched according to resist pattern 12 to form a rhenium layer 5 which is in contact with bonding pad electrode 2. Resist pattern 12 is then removed."

Mizuta discloses a step of forming a metal post (a rhenium layer 5). During that process, however, there is no resist layer with a through-hole formed therein for shaping the metal post since the resist pattern 11 has already been removed. See column 4, lines 55-56.

Therefore, Mizuta fails to disclose a step of forming a metal post while the resist layer exists. In other words, the metal post of Mizuta is shaped by etching. In the present invention, the metal post is shaped in a through-hole.

Accordingly, reconsideration and withdrawal of the rejection of claims 1, 3 and 4, as well as claims 5, 30 and 40 depending therefrom, are respectfully requested.

Claims 6, 31 and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mizuta in view of Yoshiaki, Hikari, or Natsuya, as applied above, and further in view of Dion (U.S. Pat. No. 5,130,275). This rejection is respectfully traversed. Claims 6, 31 and 41 depend from claims 1, 3 and 4 and should be in condition for allowance for at least the same reasons as set forth above.

Claims 9-14, 34-39, and 44-49 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mizuta in view of Yoshiaki, Hikari, or Natsuya with or without Dion, as applied above, and further in view of Watanabe et al. (U.S. Patent No. 6,218,281). This rejection is respectfully traversed. Claims 9-14, 34-39 and 44-49 depend from claims 1, 3 and 4 and should be in condition for allowance for at least the same reasons as set forth above.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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